

Construction Advisory

CA 2007-01
February 13, 2007

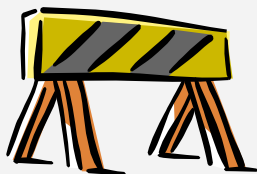
From Brenda O'Brien, Engineer of Construction and Technology

MDOT-Construction and
Technology Division
P.O. Box 30049
Lansing, Michigan 48909
Phone/517-322-1087
Fax/517-322-5664
www.michigan.gov/mdot/

Index: Traffic Control

Questions regarding this
Construction Advisory should
be directed to:

Jeff Grossklaus, Construction
Staff Engineer – Traffic and
Safety, at 517-322-5769 or
grossklausj@michigan.gov



BJO:JKG

Temporary Concrete Barrier

The Special Provision for Temporary Concrete Barrier states all new temporary concrete barrier (TCB) fabricated after September 1, 2006, must meet NCHRP 350 crashworthy criteria, along with additional MDOT requirements. For the TCB to be acceptable for use on MDOT projects, the contractor must provide the following documentation before it is placed in the field:

1. A letter from FHWA verifying the TCB meets NCHRP 350 criteria.
2. A drawing to verify that the bottom width does not exceed 28 inches, and the top is at least 6 inches wide and flat.
3. Crash tests results to verify the deflection was 6.5 feet or less. The FHWA letter will state the deflection distance. If the FHWA letter states the TCB is acceptable based on a comparison to another crash tested TCB design, then the compared TCB deflection results must be provided. For example, Mack Industries has a TCB design based on a combination of designs by the Ohio and New York DOTs. In this case, the contractor will need

to provide the FHWA acceptance letter for each of these designs. In those letters, it will indicate that the Ohio design deflected 5.5 feet, and the New York design deflected 1.27 meters (4.2 feet).

If a sloped end section is needed for a run of NCHRP 350 accepted TCB, the following is required:

1. The connection side profile should match the full size TCB section being used, along with the connection design.
2. The opposite end of the section should have a 6 inch high lip, with the top edge rounded with an 8 inch radius. This is similar to the "Temporary Concrete End Section" elevation view shown on page 5 of 6 of Standard Plan R-52-E.
3. The slope should be 1:5 as a maximum.
4. A minimum of 10 feet long.
5. Reinforcement determination will be the manufacturer's responsibility. Adequate reinforcement shall be used to maintain structural integrity of the section.

The end section will be paid as Concrete Barrier, Temporary Furnished and Operated.

Intermixing of TCB shapes on a given run is discouraged. If intermixing is necessary, a transition section shall be used. The transition section as a minimum should:

1. Be 10 feet long or greater.
2. Develop a smooth transition between the two TCB shapes, with no snag points.
3. Provide connections between each TCB shape that match each section.

The transition section will be paid as Concrete Barrier, Temporary Furnished and Operated.

Please share this information with consultants and local agencies in your area.